

Injection Drug Users' Population Estimates in New Haven Metropolitan Statistical Area (MSA)

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Introduction

- The National HIV Behavioral Surveillance (NHBS) is a collaborative effort of CDC, state and local health departments in 25 selected MSAs in the United States;
- NHBS conducts behavioral surveillance in 12-month rotating cycles. Each cycle focuses on groups that are at high risk for HIV (i.e. men who have sex with men, injecting drug users and heterosexuals at high risk);
- The NHBS-IDU cycle included 15 MSA with the highest number of people living with AIDS and 10 MSA with the highest AIDS prevalence, for a total of 25 MSAs that represented approximately 70% of total AIDS cases reported in 2000;
- Data collection of the NHBS IDU cycle in New Haven MSA was conducted in Waterbury and Bridgeport during the period of Jan 2005 – Jan 2006;

- WB Project was aimed to 1) assess the prevalence of and trends in drug use behaviors, sexual risk behaviors, and HIV testing behaviors; 2) assess exposure and utilization of prevention services.

Procedures

- Respondent Driven Sampling (RDS) was used to recruit participants into the project;
- Initial outreach selected a few individuals as "seeds". Seeds were diverse with respect to demographic factors, geographic factors, and choice of drug use;
- Eligible seeds were trained to recruit other individuals from their network. Each seed received coupons to recruit 3-5 individuals;
- Recruits brought valid coupons to the storefront for screening of eligibility and further interview;

- Eligible recruits were offered chance to recruit others. Those who agreed were trained and given 3 coupons;
- Seeds/Recruiters were rewarded for every person enrolled and interviewed;
- All interviews were conducted in private interview rooms at the storefront;
- All data collection were completed via handheld computers and uploaded daily into the main database;

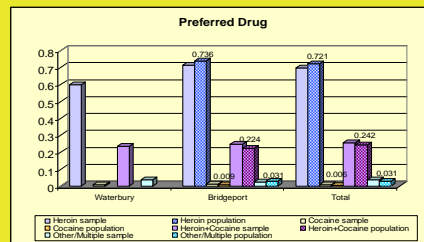
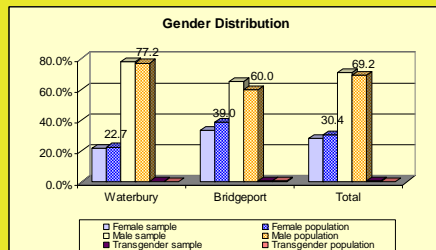
Eligibility

- 18 years of age or older;
- Injected any illegal drug in the last 12 months;
- Lived in the project MSAs;
- Evidence of injection drug use;
- Able to complete the interview in English or Spanish.

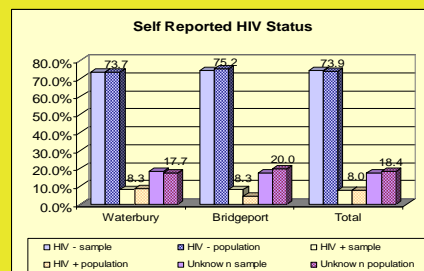
RDS and population estimates

- RDS is a special type of snow ball sampling with the advantage of efficiency in reaching hidden populations and the ability to make population estimations;
- With referral chain and network data, procedures were developed by Heckathorn and colleagues (1997, 2002) to estimate the selection probability of subgroups;
- With RDS Analytical Tool (RDSAT), population estimates can be further made by adjusting selection probabilities through bootstrapping procedures.;
- Biases from different network size and homophily (probability of people to recruit someone like him/herself. Range from -1 to 1, which -1 means a recruiter only recruits others unlike him/herself, and 1 means only recruit others like him/herself) are adjusted using RDSAT;
- A total of 585 candidates were screened within 5 months. Of those, 496 were eligible non-seeds participants whose interviews were analyzed using RDSAT and SPSS.

Sample and population Estimates



Note: Waterbury population estimates can not be computed with RDSAT 5.6



- All above demographic sample estimations, as well as key risk variable (i.e. preferred drug of choice, self reported HIV test results) falls into the 95% confidence interval of the population point estimates.

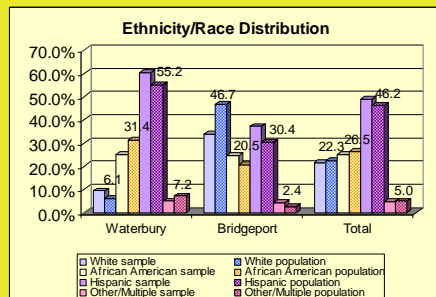
- The following drug risk, sexual risk and HIV testing behavior variables were analyzed based on a non-seed valid sample of 496 participants from both cities.

Sexual Risk

- In the past 12 months, 90.3% of male and 84.9% of female were sexually active;
- Among sexually active males, 59.8% of them had 2 or more sex partners. And only 11.1% reported always using a condom. Among men with a 'main' sex partner, 54.0% did not use a condom during their last vaginal sex. Among men with 'casual' sex partners, 45.9% had unprotected sex;
- Among sexually active women, 52.5% of them had 2 or more sex partners, and 93.2% had casual partners. Of those had 'main' sex partners, 80.7% did not use a condom during their last vaginal sex. Those had casual partners, 51.3% had unprotected vaginal sex in the last 12 months.

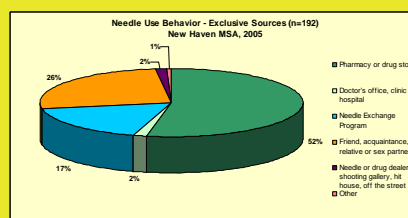
HIV testing Behaviors

- Of the total sample, 94.8% ever tested for HIV
- Among those ever tested, the mean number of tests in the last 2 years was 1.62, ranging from 0-10 times
- 9.6% participants reported positive result, and 3.8% of them did not know their status.
- Some participants did not return for testing results because they were: 'afraid of getting results' (4/12), 'too early for results' (3/12), 'too busy' (1/12), did not want to know (1/12), did not care (1/12).
- Reasons for testing were: Worried exposed to HIV in past 6 months (52.1%), Checking to make sure HIV negative (82.8%), Required by some agency (7.9%), other reasons (11.1%)
- Top 6 mentioned testing location were: Community health center/public health clinic (36.5), Correctional facility (20.0%), Hospital (11.5%), Drug treatment program (10.4%), HIV counseling and testing site 5.5%, Adult HIV/AIDS specialty clinic 3.6%.



Drug Use Risk

- First time starting using drugs were 31.85% under the age of 18, 39.31% between 18 - 24, 12.30% between 25-29, 8.67% between 30-34, 4.84% between 35-39, 2.82% between 40-44, and .20% were 50 or older;
- Although 44.6% of participants disclosed always using sterile needles, half of them obtain their needles from unsafe sources like friends, acquaintances, relatives, sex partners, needle or drug dealers, shooting galleries, hit houses, off the street and other places. 60.08% of the total sample used these unsafe needle sources.



- In the last 12 months, only 63.2% participants ever shared a needle that had been used by someone else, and 65.32% had shared injection equipments (i.e. syringe, rinse water, cooker, cotton, dividing drug with used needle, etc.) with others;

Summary of Findings

- Project provides, for the first time, population estimates in demographic, injection risk, sexual risk and HIV testing behavior profile for IDUs in the high risk New Haven Metropolitan Statistical Area.
- RDS recruitment strategy was very efficient in reaching IDUs of New Haven MSA.
- Sample estimates of key variables were all very close to the population estimates after adjusting sampling biases using RDSAT 5.6. We have good confidence that the sample finding can be generalized to the IDU population of the New Haven MSA high risk areas
- Gender and age distribution was similar to the IDUs in other Connecticut cities (i.e. Hartford).
- A high percentage of participants were at the risk of transmitting HIV because of sharing contaminated syringes with other IDUs, or using syringes obtained from unsafe sources
- Half of those who claimed "always use sterile syringes" may have the false belief of safety because their sources of syringes were not necessarily safe.
- Women were at higher sexual risk than men
- Actual HIV+ rate might be higher